CLAIMS

1. System for heating building structures (100, 120) and infrastructures,

characterized by there being placed in structures (100, 120), especially in their walls and floor (107, 122, 133), in lengths (111-113, 123, 131) laid side by side, one (30) or more lengths (123, 131) of a strip (10, 12), having a constant transversal section and comprising substantially equal cores (25, 26) of very high electrical conductivity, superimposed with an insulating film (27) between them, coated with layers of insulating material (15, 16), by the first ends of said cores (25, 26) being connected respectively by conductors (96, 97, 127, 128) to a source of electric current, and by the electric circuit being closed where the second end of said cores (25, 26), freed of its layers of insulating material (15, 16), is tightly folded (45, 46) back on itself.

2. System as in claim 1,

characterized in that the first and second ends of the two superimposed cores (25, 26) are rapidly cleaned of the layers (15, 16) of insulating material, with preliminary detachment of said layers (15, 16), by application of a fluid (40) at a very low temperature.

3. System as in claims 1 and 2,

characterized in that the first end (32) of the length (30) of strip (10, 12) is shaped as a trapezoid terminating in a rectangular extension, the width of which is equal to the lesser base of the trapezoid, which extension, when the layers (15, 16) of insulating material have been cleaned off, is inserted between the metal jaws (60, 70), freely sliding on crosswise supports (55, 56) of a frame (51, 52), of insulating material, of a clamp (50) comprising a screw-operated means of pressure (80,81) that determines electrial connection between the metal cores (15, 16) of said length (30) and the cables (96,97) of a source of electric current, respectively connected to said jaws (60, 70).

4. System as in claim 3,
characterized in that the clamp (50) is placed inside a feed box (90).

5. System as in claims 3 and 4,
characterized in that a transformer (91) is placed in the feed box (90) said transformer being connected to the lines (92, 93) of a source of electric current and supplying the jaws (60, 70) of the clamp (50) with power not exceeding 40 V and therefore amply within the safety limit for any user.

6. System as in claim 1,
characterized in that the strip (12), to facilitate adherence to the layers, above and below, of flooring in which it is laid, presents perforations passing through.

7. System as in claims 1 to 6,
characterized in that a piece (30) of the strip (10, 12) is laid in the floor of a room (100), the rectangular extension of its first end (32), inserted inside the clamp (50) in the electric feed box (90) mounted on a wall (101), said piece being laid in a spiral with straight lengths (111-113) and with turns made at each end forming an angle (115) to change direction in relation to the length just previously laid, until the centre of the room (100) is reached where the strip is cut off and the electric circuit is closed by tightly and repeatedly bending its second end (35), from which the layers (15, 16) of insulating material have been removed, and by reciprocal contact between the second ends of the cores (25, 26).

8. System as in claims 1 and 2,
characterized in that several lengths (123) of the strip (10, 12) are laid side by side in the floor of a room (120), the first ends of the two metal cores (25, 26) of each length (123) being electrically connected, in parallel or in series, to pairs of electric wires (127, 127^1) these in turn being connected by a pair of conductors (128) to the transformer (91) in a feed box (90^1), connected to the lines (92,

93) of a source of electric current, the electric circuit being closed by the second end (126) of the lengths (123), from which the layers (15, 16) of insulating material have been removed, being tightly bent over and therefore by reciprocal contact between the second ends of the metal cores (25, 26).

9. System as in claim 1,
characterized in that the cores (25, 26) are of aluminium.

10. System as in claim 1,
characterized in that the cores (25, 26) are of copper.

11. System as in claim 1
characterized in that the insulating film (27) between the two cores (25, 26) is of polyester.

12. System as in claim 1,
characterized in that the material (15, 16) of the strip (10, 12) is bitumen.

13. System as in claim 11,
characterized in that the bitumen is associated to a plastomer.

14. System as in claim 11
characterized in that the bitumen is associated to an elastomer.

15. System as in claim 1,
characterized in that the material (15, 16) of the strip is plastic.

16. System as in claim 14,
characterized in that the plastic material is polyester.

17. System as in claim 1,
characterized in that the strip (10, 12) is coated with protective fabric (20).

18. System as in claim 16,
characterized in that the protective fabric is polyester.

19. System as in claim 16,
characterized in that the protective fabric is fibreglas.

20. System as in claim 1,

characterized in that the strip (10, 12) transmits electric power comprised between the values of 100-300 W / m^2.

21. System as in claim 1

characterized in that the best way of installing the strip (10, 12) in the ground (102) comprises, laid one after another, a film (103) of polythene, a layer of polystyrene (104), a length of strip (30), a layer of cement (106) and the floor surfacing (107).

22. System as in claim 1,

characterized in that, to facilitate adherence among the layers on either side of it, the strip (12) presents perforations whose diameter may even be 10 cm, spaced apart also by 10 cm.

23. System as in claim 1,

characterized in that strip dimensions are substantially as follows: overall thickness 2 mm, thickness of each metal core: 0.2 mm, thickness of the insulating film between cores: 0.1 mm.